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STRICTURE OF THE URETHRA IN WOMEN.

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STRICTURE of the urethra is an affection that is met much less frequently in women than in men. So far about sixty cases have been reported since 1824, when Lisfranc first drew attention to this condition. The facts that this affection is more easily remedied in women, and that in them the slighter forms are apt to pass unnoticed or neglected, render it probable that, had all such cases been reported, their number would have been considerably augmented. The most frequent cause of stricture of the female urethra is gonorrheal urethritis. In these cases the formation of the stricture, as a rule, takes place more slowly than when due to other causes, the symptoms appearing on an average about the eighth year after the onset of the gonorrhea. In some cases, however, stenosis appeared as early as the end of the first year, while in rare cases it may be delayed till the twentieth year. Van de Warker and Genouville believe that, contrary to the statement of Ricord and Reybard et Fissiaux, steno

sis of the urethra is followed by symptoms of dysuria more rapidly in women than in men. Genouville explains this by the fact that the female bladder is less muscular and more distensible than that of the male, and, consequently, its functions will be more easily interfered with by any obstruction in the urethra. Strictures following gonorrhea constitute about one-third of all the reported cases, the average age of these patients being about thirty-nine years. Injuries during labor and puerperal inflammatory processes involving the urethro-vaginal septum, and resulting in the formation of cicatricial bands, may cause constriction of the urethral canal. Scanzoni has reported a case in which such a stricture resulted from a gangrenous colpitis following a forceps-delivery. Neoplasms of the urethral walls may obstruct the lumen of the urethra, as in David's case (*Gaz. des Hôp.*, 1870, lxxiii).

Stricture resulting from a urethral chancre is rare, but cases have been reported by Scanzoni, Velpeau, and Larcher. Two such cases came under my notice at the Rotunda Lying-in Hospital. In both the site of the stricture was immediately inside the meatus externus.

Two cases of congenital stenosis have been reported, one by Blum and the second by Fissiaux. In both the urachus persisted, and the urine oozed from the still patent umbilicus.

Senile contraction has also been cited as a cause by Herman. I have seen one case in which a marked stenosis of the meatus externus existed in a patient who had suffered for some time from the disease described by Breisky as kraurosis vulvæ.

When a vesico-vaginal fistula has existed for a considerable time the urethra may become greatly contracted from disuse (Skene) or from having been involved by the inflammatory processes at the time of the formation of the fistula. Too extensive application of any form of cauterization will also produce cicatricial narrowing of the urethra.

Most frequently the stricture is situated in the anterior third of the urethra, usually at or near the meatus externus. In rare cases several strictures may co-exist.

The symptoms of urethral stenosis are difficulty in micturition, with or without pain; gradually, as the stenosis becomes more marked, the stream of urine becomes less in volume, till it is voided only drop by drop; or, eventually, complete retention takes place. Should cystitis also be present, we find frequent desire to urinate, vesical tenesmus, the passage of pus and perhaps of blood in the urine. Owing to the resistance that it has to overcome, the bladder-wall becomes hypertrophied. Scanzoni has drawn attention to this condition and the effect which it produces on the internal genital organs. He has seen prolapse of the anterior vaginal wall result from it. Two cases of rupture of the bladder from over-distention, due to this cause, have been recorded. As in the male, here, too, cystitis, followed by ascending ureteritis and pyelo-nephritis, may set in and result in a fatal termination.

As a rule, the diagnosis is easy, the stricture being situated, in the majority of cases, in the anterior third of the urethra. On passing a sound along the urethra and following its course with the index-finger

in the vagina an induration can usually be detected at the point where the sound is arrested. In this way, also, any cicatricial bands in the vagina which may be compressing the urethra can be palpated. A careful examination will exclude retention from pressure by neoplasms in the urethral walls or in the pelvis, retroversion of the gravid uterus, hematocele, etc.

The urine should be carefully examined so as to exclude cases in which the frequency of micturition and hindrance to the entry of the sound into the bladder arise from the presence of cystitis.

Calculus can be eliminated from the diagnosis by a careful bimanual examination of the bladder, combined with cystoscopy or sounding.

In most cases gradual dilatation performed every two or three days with Simon's urethral specula or Hegar's dilators will bring about a cure. Care should be taken to lacerate the urethral mucous membrane as little as possible in carrying out the dilatation. Should this prove ineffectual, external or internal urethrotomy may be performed. When the stricture is situated in the anterior part of the urethra, close to the meatus, complete division of the stricture and the urethro-vaginal septum may be performed, and the urethral mucous membrane stitched to the vaginal mucous membrane, thus transforming the two passages from the seat of the stricture to the meatus into one canal. Should cicatrices exist in the vagina they should be divided or excised. When there is much periurethral thickening vaginal douches of warm sublimate-solution and tampons of iodoform-gauze saturated with a solution of

ichthyol and glycerol (10 per cent.) may be employed to assist in reducing it. When the obstruction is due to the presence of a new growth this should be removed. To perform internal urethrotomy Winckel advises that the urethra should be dilated till the seat of the stricture will admit the finger. A knife is then passed in with the blade held flat against the finger; after passing it through the seat of the stricture the cutting edge of the knife is turned and pressed against the cicatrix, so as to divide it completely during the withdrawal of the blade. Should any excessive hemorrhage occur a large urethral bougie may be introduced and left in situ, so as to compress the bleeding point. The dilatation should afterward be maintained by the use of bougies if there is any tendency for the stricture to recur. In all cases the patient should be taught to introduce the bougie herself, and warned to return at once for treatment should any difficulty in micturition reappear. Resection of the strictured portion of the urethra after the method employed by Jouon in the male (*Sem. Méd.*, May 14, 1892) may be performed in cases in which the foregoing methods fail. The cut surfaces are united by fine catgut sutures. I have employed this procedure with good result in a case of traumatic stricture situated in the middle third of the urethra. Electrolysis has been successfully used by Newman and Fissiaux in their cases. Though good results have occasionally been obtained by rapid forcible dilatation, it should be discarded, as it may lead to persistent incontinence, and has no advantage over gradual dilatation. Verneuil lost one case treated by this method. Probably, how-

ever, with the recent advantages of asepsis any danger as regards the life of the patient can be altogether obviated. In cases in which, with narrowing of the urethra, there is also present a vesico-vaginal fistula the former condition should be attended to before attempting to close the fistula.